

13 October 2008

Chem-Bio News

1. MICROSCOPE-ON-A-CHIP IS ONE STEP CLOSER TO THE TRICORDER: *"In the very near future, drawing blood may be obsolete. Instead, implants will be able to image your blood and monitor it constantly."*

2. TEXAS OFFERING \$100 MILLION IN INCENTIVES TO GAIN BIO-AGRO DEFENSE FACILITY: *"Gov. Rick Perry has joined with San Antonio leaders in a unified effort to help sell the U.S. Department of Homeland Security on the merits of placing its planned National Bio and Agro-Defense Facility (NBAF) in the Alamo City."*

3. [INDIA] ARMY WANTS MINI SPY DRONES WITH 'KILLER ROLE': *"The Army has launched a global hunt for a "massive" induction of "mini" and "micro" spy drones for short-range surveillance and intelligence-gathering missions as well as detection of NBC (nuclear, biological, chemical) contaminants in the battlefield."*

4. FEDS BUYING MORE Z BACKSCATTER VANS FOR MOBILE X-RAY DETECTION: *"Billerica, MA-based American Science and Engineering, Inc., an X-ray detection technology specialist, has received a \$4.4 million federal government order for an unspecified number of its Z Backscatter mobile X-ray-screening vans."*

5. SENSITIVE NANOWIRE DISEASE DETECTORS MADE BY YALE SCIENTISTS: *"Yale scientists have created nanowire sensors coupled with simple microprocessor electronics that are both sensitive and specific enough to be used for point-of-care (POC) disease detection, according to a report in Nano Letters."*

6. MYSTERY S.AFRICA DISEASE MAY BE RODENT BORNE: *"A disease that has killed three people in South Africa and forced others into isolation wards may be rodent borne, a health official said Sunday, SAPA news agency reported."*

CB Daily Report

Chem-Bio News

MICROSCOPE-ON-A-CHIP IS ONE STEP CLOSER TO THE TRICORDER

By David Bullock

Wired.com

October 13, 2008

"In the very near future, drawing blood may be obsolete. Instead, implants will be able to image your blood and monitor it constantly."

This is because scientists at Caltech have squeezed a microscope onto a computer chip not much larger than a dime. And that's just the demo unit."

"The microscope-on-a-chip uses standard, off-the-shelf hardware sensors with a clever modification — pixels on the sensor are forced to only look through microscopic holes, which allows the chip to image very tiny things. The standard hardware makes future mass production cheap and easy and Yang's lab is already working to create a small batch of iPod-size prototypes. He hopes to have working units in doctor's hands in a year or two, with full production in five years."

The full article can be found at: http://www.wired.com/science/discoveries/multimedia/2008/10/gallery_scope_chip

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TEXAS OFFERING \$100 MILLION IN INCENTIVES TO GAIN BIO-AGRO DEFENSE FACILITY

By W. Scott Bailey
San Antonio Business Journal
October 9, 2008

"Gov. Rick Perry has joined with San Antonio leaders in a unified effort to help sell the U.S. Department of Homeland Security on the merits of placing its planned National Bio and Agro-Defense Facility (NBAF) in the Alamo City.

Texas is committing more than \$100 million to the effort, including \$56 million that the governor and other top state officials have pledged to secure through the legislative appropriations process in the upcoming session."

The full article can be found at: <http://sanantonio.bizjournals.com/sanantonio/stories/2008/10/06/daily34.html>

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[INDIA] ARMY WANTS MINI SPY DRONES WITH 'KILLER ROLE'

The Times of India
October 10, 2008

"The Army has launched a global hunt for a "massive" induction of "mini" and "micro" spy drones for short-range surveillance and intelligence-gathering missions as well as detection of NBC (nuclear, biological, chemical) contaminants in the battlefield.

Interestingly, the Army even wants these man-portable spy drones or UAVs (unmanned aerial vehicles) to be capable of "a killer role". "They should be capable of carrying warheads and explosives for hard kill of light targets," said a source."

The full article can be found at: <http://timesofindia.indiatimes.com/India/>

Army_wants_mini_spy_drones_with_killer_role

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FEDS BUYING MORE Z BACKSCATTER VANS FOR MOBILE X-RAY DETECTION

Government Security News

October 13, 2008

"Billerica, MA-based American Science and Engineering, Inc., an X-ray detection technology specialist, has received a \$4.4 million federal government order for an unspecified number of its Z Backscatter mobile X-ray-screening vans. The contract includes operator, training, service and warranty. According to the company, the Z Backscatter van's "drive-by" capability allows one or two operators to conduct X-ray imaging while driving past suspect vehicles and objects. For personnel safety in dangerous environments, a remote console is available for operating the system in stationary mode from a distance of up to 500 meters."

The full article can be found at: <http://www.gsnmagazine.com/>

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SENSITIVE NANOWIRE DISEASE DETECTORS MADE BY YALE SCIENTISTS

Nano Techwire.com

October 11, 2008

"Yale scientists have created nanowire sensors coupled with simple microprocessor electronics that are both sensitive and specific enough to be used for point-of-care (POC) disease detection, according to a report in Nano Letters.

The sensors use activation of immune cells by highly specific antigens — signatures of bacteria, viruses or cancer cells — as the detector. When T cells are activated, they produce acid, and generate a tiny current in the nanowire electronics, signaling the presence of a specific antigen. The system can detect as few as 200 activated cells.

In earlier studies, these researchers demonstrated that the nanowires could detect generalized activation of this small number of T cells. The new report expands that work and shows the nanowires can identify activation from a single specific antigen even when there is substantial background "noise" from a general immune stimulation of other cells.

The full article can be found at: <http://nanotechwire.com/news.asp?nid=6750>

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MYSTERY S.AFRICA DISEASE MAY BE RODENT BORNE

By Gordon Bell
Reuters
October 12, 2008

"A disease that has killed three people in South Africa and forced others into isolation wards may be rodent borne, a health official said Sunday, SAPA news agency reported."

"The causative agent of the disease ... may be a rodent borne arenavirus related to the lassa fever virus of West Africa," SAPA quoted Lucille Blumberg of the National Institute for Communicable Diseases as saying."

The full article can be found at: <http://www.reuters.com/article/healthNews/idUSTRE49B2D220081012>

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